**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**REGION 7**
11201 Renner Boulevard
Lenexa, Kansas 66219

JAN 0 5 2017

Mr. Dennis W. McKinney
Corporate Director Environmental, Health and Safety
Fortune Brands Home and Security
25300 Al Moen Drive
North Olmstead, Ohio 44070

RE: Draft Remedy Implementation Plan for the Former Waterloo Industries Facility,
300 Ansborough Avenue, Waterloo, Iowa, November 28, 2016
EPA ID # IAD005277959

Dear Mr. McKinney:

The U.S. Environmental Protection Agency has reviewed the subject document, received November 28, 2016, and provides the following comments:

1. Section 1.1, page 1: The reference to "OSWER Directive 98200.4-17P" should be "OSWER Directive 9200.4-17P".

2. Section 2.1.3, page 5: In the second paragraph, the phrase "…appropriate training, education or experience…" should read "…appropriate training, education and experience".

3. Section 3.7, page 24: To be consistent with the institutional control components specified in the Statement of Basis, exposure to soil contaminated with polycyclic aromatic hydrocarbons above risk-based screening levels north of the main building must be identified here as a potential exposure pathway via soil ingestion and dermal contact for a potential future construction worker or industrial worker.

4. Section 4.4, page 30: This section must also include a performance criterion describing how the start-up sampling of the effluent air for the dual-phase vapor extraction system described in Section 8 will ensure that contaminant mass and concentrations in the effluent air will not exceed regulatory standards.

5. Section 4.5, page 31: The set of monitoring wells identified here and in Table 5-2 as comprising the monitoring network does not include wells MW-5, -6, -12, and -13 which monitor the plume from the former wastewater treatment area as described in Section 3.6.4.2. Section 3.2.1 of the Remedy Selection Process Meeting Report (Revision 1) dated November 2015 specifies that groundwater in this area will continue to be monitored as part of the remedy implementation work. These wells must be discussed here and included in the sampling plan summarized in Table 5-2. An annual sampling frequency for these wells may be warranted.

6. Section 6.1.2, page 37: The type of submersible pump proposed for groundwater sampling should be specified here.

7. Section 6.1.2, page 38: The EPA sampling guidance document on using bailers referenced in the last bullet on this page should be explicitly identified.

8. Section 6.2, page 39: This section should include or reference the concrete drilling and patching procedures necessary to collect these samples from beneath the slab. The drilling, sampling and patching work must not interfere with or damage the DPVE equipment so that it may continue to operate, if necessary, after the samples have been collected.

9. Section 6.3.3, page 47: The turn-around time for analyzing these samples must be specified. Given the startup sampling frequency specified in Section 8.1.1 and the potential need to make changes to the system operating parameters quickly, a turnaround time of 24 hours is warranted during the startup period. A standard turnaround time may be used after the startup period.

10. Section 7.1, page 54: Does the proposed design for the DPVE system include the flexibility to add more extraction points, should pilot testing or system performance over time suggest that this is necessary?

11. Section 7.7, page 63: Please configure the DPVE system controller to copy the EPA project manager on system status emails, at least during the start-up phase of operation.

12. Section 8.0, page 67: The last bullet of this section discusses discharge of "treated" water from the DPVE system; however, previous sections indicated that produced water from the system would be hauled off-site for disposal. This section must describe what water will be treated, whether the water will be hazardous as defined by RCRA, how it will be treated, where it will be discharged, and any necessary discharge permitting. Note that treating waste on-site will likely require a RCRA permit.

13. Section 8.1.2, page 68: This section references an "AS/SVE" system which is inconsistent with the selected remedy. This reference must be corrected.

14. Section 9.2, page 70: The minimum vacuum level of 0.004 inches of water beneath the supervisor's office seems insufficient. Justification for this vacuum level should be provided, and the target vacuum level increased if warranted.

15. Sections 9.2 and 9.3, pages 70-71: It is not clear why a 3-inch diameter riser pipe is specified when the extraction point has a diameter of 4 inches. Larger diameter riser pipe will reduce flow losses and help establish a better vacuum field beneath the slab. Consider using 4" riser pipe and 45-degree, rather than 90-degree, angle fittings to reduce flow losses.

16. Section 9.9, page 74: The Operations and Maintenance visits described here should include measurement of the SSVE vacuum field beneath the supervisor's office using the vapor pin sampling ports, to ensure that the vacuum field extent remains sufficient over time.

17. Section 10.0, fifth bullet: This section must describe or reference the specific maintenance activities that will be performed on the building slab to ensure that it is not compromised and can serve as an engineered cap.

18. Section 11.1, page 77: A data review beyond a simple tabulation of laboratory analytical data is required for this project. This must include, at a minimum, an evaluation of the laboratory QA measures (method blanks, lab control samples and duplicates, surrogate recoveries, matrix spikes and duplicates, etc.) to ensure they were performed as required and used to qualify the data appropriately; evaluation of field QC measures (equipment blanks, trip blanks, field duplicate pair agreement, etc.) to ensure they were analyzed as required and assess whether additional data qualifiers are warranted; verification that holding times were met; an assessment of any sample chain-of-custody, preservation and shipping issues; an assessment of whether the analytical reporting limits met the data quality objectives; and an overall assessment of whether or not the data are usable for assessing system performance and progress towards the remedial action objectives.

19. Section 11.1, page 77: This section must specify what criteria will be used to determine whether laboratory results are "suspect" and warrant a full data validation.

20. Section 12.1, page 84: The EPA is not providing comments on the cost estimate provided in Appendix G of this document, as several comments in this letter affect the scope of the planned work and may change the cost estimate. The EPA will review and comment on the revised cost estimate after these comments have been addressed. Note that remedial action at the facility will continue for as long as necessary regardless of the timeframe assumed for the purposes of preparing the cost estimate.

21. Section 13.0, page 85: The plan presented here for verifying attainment of the remedial action objectives is too prescriptive given the inability to predict exactly how, and for how long, the remedy will operate. For example, contaminant rebound is possible after the DPVE system is turned off, and this plan does not consider the possibility of switching from the active DPVE remedy to a monitored natural attenuation remedy at some point (this is why MNA geochemical parameters will be analyzed, after all). This section must be rewritten to state that once Waterloo believes the RAOs have been achieved throughout the facility, they will prepare a letter to the EPA presenting their conclusions and the supporting lines of evidence including groundwater sampling results, contaminant trends over time, system performance and mass removal metrics, soil sampling results, etc. The EPA will review this letter and either confirm attainment of the RAOs or request additional remedial actions. In addition, this section should reference and be consistent with Figure 8-1.

22. Section 13.1, page 85: This document cannot bind the EPA to a pre-determined course of action. This section must be rewritten to state that once Waterloo has completed the RIP work and the EPA has had an opportunity to review, comment on, and approve the Final Summary Report, Waterloo will submit a written request to the EPA to confirm regulatory closure of the facility and release Waterloo from its financial assurance obligations.

23. Section 13.1, page 85: This section references a different facility. This must be corrected.

24. Table 5-3: This table must include the air samples from the DPVE system.

25. Table 5-4: The set of analytes for groundwater presented here does not match the set in Table 1 of the Statement of Basis. This table must be modified to include all of the required analytes in the Statement of Basis.

26. Table 5-4: This table must specify analytes for air samples to be collected from the DPVE system, indoor and outdoor air, and sub-slab vapor samples. Air samples collected from the DPVE system during startup should be analyzed for the full suite of method TO-15 analytes; after the startup period, Waterloo may request a reduced analyte list.

27. Figure 8-1: This figure must be revised to be consistent with Section 13.0.

28. Appendix A: This county regulation does not actually prohibit installation of private drinking water wells as stated in Section 10.0, but establishes a process by which construction of new wells can be permitted. The institutional controls to be placed on the facility must not rely on this regulation. Section 10.0 must be modified to reflect the true purpose of this regulation.

29. QAPP, General: When the quality assurance project plan is ready for final approval, it will need to be submitted with the appropriate signatures.

30. QAPP, General: References to Section 10.3 of the RIP are included in QAPP Sections 1.5, 2.10.3, 3.2 and 4.4; however, this section does not exist in the RIP. It appears these sections should reference Section 11.3, Reporting, in the RIP.

31. QAPP Section 1.2.4, Soil Vapor and Indoor Air Sampling Design and Rationale: This section states "Air and vapor samples will be collected according to the procedures described in Section 6.3.2 of the RIP." The dual phase vapor extraction system sample collection procedures are addressed in Section 6.3.3 of the RIP and should be referenced.

32. QAPP Section 1.2.5, page 6: This section indicates that soil samples will be tested for geochemical and biochemical parameters, which is incorrect. Also, this section does not specify the analytes for indoor air, soil vapor and DPVE air monitoring. These issues must be corrected. In addition, the referenced Table 1 must be corrected in the same manner as indicated for Table 5-4 in Comments 25 and 26 above.

33. QAPP Section 1.2.6, page 6: This section must discuss the uses of the air sample data.

34. QAPP Section 1.4.1.1, General Project Management: References are made to Partner-in-Charge and Principal-in-Charge, which appear to be the same position and should be consistent throughout the QAPP.

35. QAPP Section 1.4.1.2, Field Activities: Under Subcontractors, the analytical laboratories who will analyze the soil, soil vapor, and air samples collected need to be identified.

36. QAPP Section 1.7, page 15: The name of the EPA contact is misspelled.

37. QAPP Section 2.3, Sample Handling and Custody: This section states "Sample custody procedures will be consistent with Attachment 4 of the EPA Region V guidance entitled *Content Requirements for Quality Assurance Project Plans (1991).*" This document could not be located and should be verified and referenced appropriately.

38. QAPP Sections 2.3.1.1, 2.3.1.2, and 2.3.1.3, pages 16-18: These sections must be modified to also discuss air samples.

39. QAPP Section 2.4, Analytical Methods: Since some of the laboratory analytical methods to be utilized were not submitted with this QAPP, the procedures could not be verified. The missing analytical methods must be provided.

40. QAPP Section 2.8, Inspection/Acceptance Requirements for Supplies and Consumables: This section should include who will be responsible for inspection and acceptance.

41. QAPP Section 4.1.3, page 35: See Comments 18 and 19 above.

42. QAPP Table 2, Data Quality Objectives, Step 3: This step states "All VOC data will receive a Tier II data validation...". It is unclear what is meant by Tier II and why it applies only to VOC data. If this means the Level 2 data review referenced in Section 19.14.4.3 of the Test America QA Manual, then this should be verified and clarification should be provided. In addition, the full suite of analytes in the Pace Analytical Microseeps Method AM20GAX should be listed here to be consistent with Tables 1 and 4 of the QAPP.

43. QAPP Table 4: See Comments 24 and 26 above. In addition, Method SM 3500Fe-D appears to be in error, the correct method appears to be SM 3500Fe-B.

44. Health and Safety Plan, General: Emergency procedures and an emergency action plan for incidents such as fire, severe weather or medical emergency and including information such as notification methods to personnel on site and a clearly labeled map showing the route to a local hospital is not included. The "Client-Specific Emergency Response" and "Emergency Contacts" sections are missing key information. The EPA recommends that the missing procedures, plan and information be included here.

45. Materials Management Plan Section 1.3, page 3: Notification of any emergency excavations must be provided to the EPA by telephone or email within 48 hours of the emergency issue, in addition to the written notification specified here.

46. MMP Section 2.0, page 3: This section must explain or reference procedures for how air monitoring will be conducted to support excavation work.

47. MMP Sections 3.3, 3.4, 3.5 and 3.6, pages 4-6: These sections provide almost no detail on how the described tasks will be performed. Management of these waste streams must be described in sufficient detail to enable field personnel to carry out these activities properly. Standard Operating Procedures may be referenced and included as appropriate.

48. MMP Section 4, page 7: The EPA hereby requests that Waterloo provide documentation for the disposal of waste materials generated during implementation of the RIP.

49. Environmental Covenant, General: The EPA uses the Iowa model covenant language as a standard for new environmental covenants. This language is available at http://www.iowadnr.gov/Environmental-Protection/Land-Quality/Underground-Storage-Tanks/Leaking-Underground-Tanks/Environmental-Covenant. The Waterloo environmental covenant should be revised to use the "CSS Environmental Covenant Model" language throughout. In addition, although the IDNR has indicated to the EPA that it does not wish to be an "Agency" for the purposes of the covenant, they should be included on any notifications specified in the covenant.

50. Environmental Covenant, Section 7: The AULs proposed here require additional detail. The EPA recently used the AULs below for a covenant on a similar site in Iowa, and these AULs should replace those in the draft covenant:

(a) **No Residential Land Use**: Based on records on file at the EPA's Regional office the Property meets applicable standards for non-residential use. Therefore, contaminants of concern that may be remaining at the Property do not pose a significant current or future risk to human health or the environment so long as the activity and use limitations imposed hereby remain in place. The Property shall **not** be used for residential purposes, which for purposes of this Covenant include, but are not limited to: single family homes, duplexes, multiplexes, apartments, condominiums, schools, child-care facilities, or any land use where persons can be expected to reside on the Property.

(b) **Maintenance of Cap/No Disturbance of Soil:** Based on records on file at the EPA's Regional office contaminants of concern in the soils at the Property exceed standards for non-residential use, but do not pose a significant current or future risk to human health or the environment with respect to non-residential uses of the Property so long as the soil is not disturbed such that exposure would result. Therefore, soil and the building slab on the Property in the areas indicated in Exhibit 1 shall not be excavated or otherwise disturbed in any manner without the prior written approval of the EPA. In addition, the Grantor/Holder/Transferee shall properly maintain the building slab in the area indicated in Exhibit 1 as an engineered cap. If the Grantor/Holder/ Transferee desires to disturb soil or the cap at the Property, then such Grantor/Holder/Transferee shall request permission to do so from the EPA at least 30 days before such activities are scheduled to begin. Based on the potential hazards associated with these activities, the EPA may deny the request to disturb the soils or cap or may require specific protective or remedial actions before allowing such activities to occur. Contaminated soil may be disturbed if necessary during an emergency (such as water or gas main break, fire, explosion or natural disaster), in which case the Grantor/Holder/Transferee shall ensure that notification is provided to the EPA and IDNR orally or in writing as soon as practicable, but no later than 48 hours after the disturbance. Any contaminated soil disturbed as part of an emergency response action must be returned to its original location and depth, or be properly characterized, managed and disposed of, in accordance with all applicable local, state, and federal requirements. Within 30 days after such emergency has been abated, the Grantor/Holder/Transferee shall provide a written report to the Agency and IDNR describing such emergency and any response actions.

(c) **No Drilling or Use of Groundwater**: Based on records on file at the EPA's Regional office, contaminants of concern remain in groundwater in one or more zones beneath the Property at levels exceeding standards for groundwater use. Therefore, in addition to any applicable state or local well use restrictions, the following restrictions shall apply to the Property:

a. groundwater from the Property shall not be consumed or otherwise used for any purpose, except for the collection of samples for environmental analysis, collection, treatment or disposal of groundwater for remedial purposes, or collection, treatment or disposal of groundwater as part of excavation or construction activities;

b. there shall be no drilling or other artificial penetration of any contaminated groundwater-bearing unit(s), unless performed in accordance with an Agency-approved work plan; and

c. the installation of any new groundwater wells on the Property is prohibited, except for wells used for investigative, monitoring and/or remediation purposes installed in accordance with an Agency-approved work plan.

(d) If any person desires in the future to use the Property for any purpose or in any manner that is prohibited by this Covenant, the Agency and IDNR must be notified in advance so that a Modification, Temporary Deviation, or Termination request can be considered as described below. Further analyses and/or response actions may be required prior to any such use.

51. Environmental Covenant, Section 7(c): This section misinterprets the intent of the Institutional Controls specified in the Statement of Basis and Final Decision documents. Anyone intending to conduct non-emergency construction projects at the facility which would involve excavation or de-watering in the vicinity of AOC-5, or disturbance of surface soil contaminated with PAHs above RSLs north of the main building, would need to notify the EPA in advance of such work *and obtain EPA approval for such work*. The EPA's approval for such work may require specific conditions or procedures for protection of workers and the public. Comment 50 above provides language to address this issue.

52. Environmental Covenant, Section 13: The sentence "Additionally, the signatories to this Covenant expressly grant to IDNR the power to enforce this covenant." should be added to this section.

53. Environmental Covenant, Exhibit 1: The proposed area subject to the limitations of Section 7(c) is insufficient. The area around AOC-5 must extend south to the facility property line so that it applies to excavations that may take place outside the building in the vicinity of MW-2. In addition, a separate area subject to the limitations of Section 7(c) must be defined for the PAH-contaminated soil north of the main building. Note that the area currently proposed in Exhibit 1 is sufficient for the limitations imposed by Section 7(d) (maintenance of the concrete slab as an engineered cap).

Please provide a revised document incorporating these changes within 30 days of your receipt of this letter. If you have any questions, please contact me at (913) 551-7324.

Sincerely,

Daniel Gravatt, P.G.
Geologist
RCRA Corrective Action and Permits Section
Waste Remediation and Permitting Branch
Air and Waste Management Division

cc: Mark Seaman, ERM
Amie Davidson, IDNR